

# The 5Rs of Waste are What?

## Teachers Guide



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## **KESAB Waste and Recycling Education**

KESAB is a non-profit community organisation which works with people to restore, preserve and improve the total environment. KESAB offers interactive programs to schools and the wider community, presenting programs relating to KESAB's objectives, national curriculum and community interest.

The classroom activities included in the resources section that complement this guide have been sourced from the *RRR You Ready: The NYC Teachers RRResource Guide*, 2001. Activities are included for different age groups, please read through all the activities and adapt them to your classes particular needs. It would be most beneficial if the students use their visit from KESAB as part of a larger unit of work.

### **Overview**

Students will learn how to identify different common materials and begin to understand the process of recycling paper, glass, steel, plastic and paperboard cartons. They will engage in activities to explore the use, reuse, disposal, recovery and recycling of certain common materials.

### **Key Understandings**

- The introduction of common materials and how they are being used for a wide range of purposes, including packaging.
- materials all have different properties.
- People can make choices to reduce waste by reducing, reusing and recycling.
- There are 7 commonly used types of plastic, identified by PICs (Plastic Identification Codes)
- There are variations in the physical properties of different plastics in regard to density, strength, light transmission, hardness and brittleness.
- Plastics, glass, paper, metals, etc. are specifically selected to be used for different purposes.
- Some materials can be altered by heat.
- All plastics can theoretically be recycled. Not all actually are at the moment.
- Plastics must be sorted into types prior to being recycled.
- Materials can be placed in a kerbside container collected and transported to a sorting facility where they are baled and sent off to manufacturing plants for reprocessing.

### **Key Vocabulary**

Please ensure your students are familiar with the following vocabulary before your class visit from KESAB Education Services.

plastic	recycle	danger	environment	supermarket
litter	bottle	reuse	reduce	packaging
Council	kerbside	collection	melt	paper
rubbish	waste	landfill	metal	glass

## Links with SACSA Framework

The 5Rs of Waste are What? program, together with this Teacher's Guide, comprise a unit of work that can enable students to work towards achieving the following learning outcomes depending on the choice of activities selected.

LEARNING AREA	STRAND	KEY IDEAS	Essential Learnings	Key Competencies
<b>English</b>	<i>Strategies</i>	1.9 Uses strategies for listening attentively to ideas and opinions in a range of spoken texts.	T C	KC2 KC6
		1.10 Experiments with strategies for planning, composing and presenting spoken texts for formal and informal situations.	T C	KC2 KC3 KC6
		1.11 Experiments with strategies when selecting, reading, viewing and critically interpreting written and visual texts, and with teacher support, discusses their use of strategies.	Id T C	KC1
<b>Health and Physical Education</b>	<i>Health of Individuals and Communities</i>	1.6 Describes what it means to be healthy and the role of others in the community in supporting the health of its members.	In F	KC1
<b>Society and Environment</b>	<i>Time, Continuity and Change</i>	1.1 Identifies differences between their life and the lives of other generations in their society and explains some reasons for this.	Id In C	KC1
		1.2 Presents events and life stages in sequence.	F T C	KC2
		1.3 Identifies and values aspects of environments, and of family and community ways of life, that have endured or changed, and makes predictions about the future in relation to these.	F In T	KC1 KC6
	<i>Place, Space and environment</i>	1.4 Explains and communicates how people interact and identify with environments.	Id In	KC2
		1.5 Represents and categorises features of places and resources, using maps, contextual language and models.	C	KC2 KC5
		1.6 Participates actively in projects to show understanding of the importance of caring for local places and natural environments.	F In T	KC3 KC4
		1.9 Demonstrates a capability to see and value points of view other than their own.	Id T	
	<i>Societies and Cultures</i>			

	<i>Social Systems</i>	1.10 Describes the meaning of 'needs' and 'wants', and identifies how people cooperate in society to meet current and future needs.	F In	KC1
		1.11 Identifies the sources of some goods and services, and can explain the ways our daily living depends on them.	In T C	KC1
		1.12 Takes an active part in making decisions to achieve goals while listening to, negotiating, and cooperating with others, and showing awareness of rights, responsibilities and rules.	In T	KC3 KC4
<b>Design and Technology</b>	<i>Critiquing</i>	1.1 Makes judgments about the significance of different characteristics of products, processes and systems made by themselves and others.	T	KC1
	<i>Making</i>	1.5 Explores current and alternative uses of materials and equipment in creating products, processes and systems.	F C	KC1
		1.6 Understands the importance of simple organisation and safety issues in terms of their consciousness of people and fairness.	Id In	KC1
<b>Mathematics</b>	<i>Exploring, Analysing and Modelling data</i>	1.2 Uses everyday comparative language and number to describe the data they have generated in parts and as a whole and describe how the data assists them to answer their own questions.	C	KC2
	<i>Measurement</i>	1.4 Compares and orders the measurable attributes of distance, surface, space, mass, turn/angle and time to describe the size of a wide range of familiar figures, objects and events.	T C	KC1
	<i>Number</i>	1.6 Uses the base 10 number system and fractions to represent numbers when working with their peers, collections of objects, measurements and data.	In T C	KC4
<b>Science</b>	<i>Energy Systems</i>	1.3 Identifies sources of energy and describes the ways in which energy is used in daily life.	T C	KC1 KC2
	<i>Life systems</i>	1.5 Investigates the features and needs of living things, and demonstrates an understanding of their interdependence with each other and the physical world.	In T C	KC1
	<i>Matter</i>	1.7 Identifies properties of materials that are observable through the senses and recognises the uses of these materials.	T C	KC1
		1.8 Identifies and predicts materials that change and do not change.	T	KC1